M-540V

SERVICE MANUAL

Ver 1.0 2001. 02

E Model
Chinese Model
East European Model

Model Name Using Similar Mechanism	M-530V/535V/630V
Tape Transport Mechanism Type	MZ-530V-99

SPECIFICATIONS

Tape
MICROCASSETTE™ (normal position type)
Recording system
2-track 1-channel monaural
Speaker
Approx. 3.6 cm (1 7/16 in.) dia.
Tape speed
2.4 cm/s (15/16 ips), 1.2 cm/s (15/32 ips)
Frequency range
300 – 4,000 Hz (with TAPE SPEED switch at 2.4 cm/s)
Output
Earphone jack (minijack) for 8 – 300 ohms earphone
Power output (at 10% harmonic distortion)
250 mW
Power requirements
3 V DC batteries R6 (size AA) × 2/External DC 3V power sources
Dimensions (w/h/d)
Approx. 62.2 × 121.5 × 24.3 mm (2 1/2 × 4 7/8 × 31/32 in.) incl. projecting parts and controls
Mass
Approx. 125 g (4.5 oz)
Supplied accessories
Microcassette tape MC-30 (1) (Europe only)

Design and specifications are subject to change without notice.

MICROCASSETTE™-CORDER

9-873-088-11
2001B1600-1
© 2001.2

Sony Corporation
Audio Entertainment Group
General Engineering Dept.

SONY

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Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

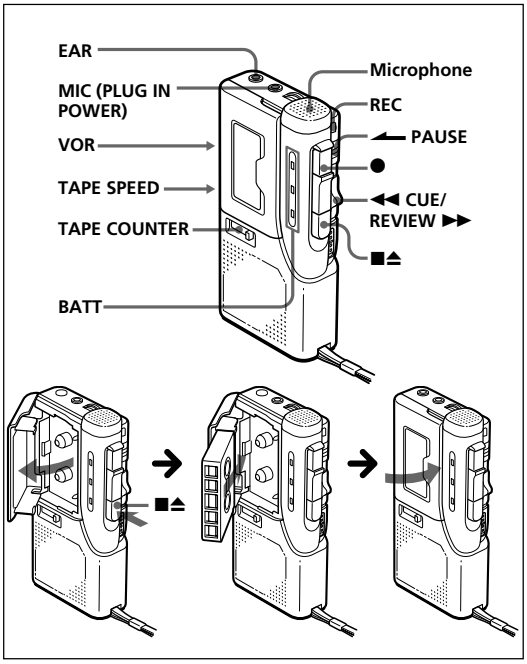
- Keep the temperature of the soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SECTION 1
GENERAL

This section is extracted from instruction manual.

Recording

Make sure that nothing is connected to MIC (M-640V only).



1 Press the reset button of the TAPE COUNTER (M-640V/540V only).
2 Press ■⏏ and insert a standard microcassette with the side to start recording facing the lid.
3 Select the desired tape speed.
2.4 cm for optimum sound (recommended for normal use): A 30-minute recording can be made using both sides of the MC-30 microcassette.
1.2 cm for longer recording time: A 60-minute recording can be made using both sides of the MC-30 microcassette.
4 Set VOR to H, L or OFF (M-640V/540V only).
If you set VOR to H or L, the unit automatically starts recording the sound and pauses when there is no sound (you can save tapes and batteries).
H : To record at meeting or in a quiet and/or spacious place.
L : To record for dictation or in a noisy place.
When the sound is not loud enough, set it to OFF, or the unit may not start recording.
5 Press ●.
◀ is pressed simultaneously and recording starts. While the tape runs, the REC lamp or REC/BATT lamp lights and flashes depending on the strength of the sound (M-640V/540V only).
Recording level is fixed.

To	Press or slide
Stop recording	■⏏
Start recording during playback	● during playback (the unit becomes in the recording mode)
Review the portion just recorded	Push up ◀◀CUE/▶▶REVIEW toward ▶▶REVIEW during the recording. Release the button at the point to start playback.
Pause recording	Slide ▬PAUSE in the direction of the arrow. The REC/BATT (M-540V), BATT (M-430) or REC (M-640V) lamp goes off.
Take out a cassette	■⏏

Note

Select the 2.4 cm tape speed for recording, if you play back the recorded tape with another unit. Otherwise, the sound quality may be changed.

Notes on VOR (Voice Operated Recording) (M-640V/540V only)

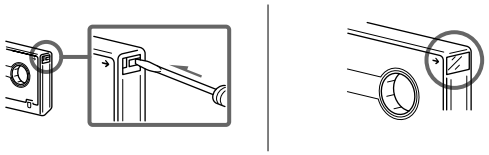
- The VOR system depends on the environmental conditions. If you cannot get the desired results, set VOR to OFF.
- When you use the system in a noisy place, the unit will stay in the recording mode. If the sound is too soft, on the contrary, the unit will not start recording. Set VOR to H (high) or L (low) depending on the conditions.

To monitor the sound

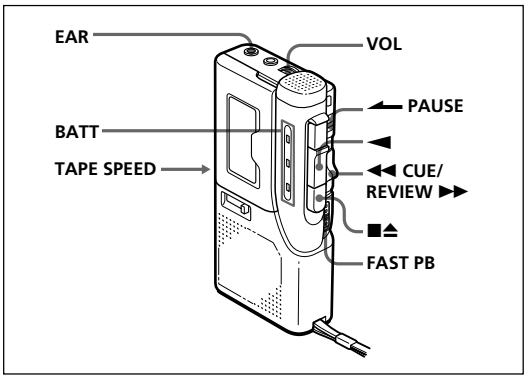
Connect an earphone (not supplied) to EAR jack. The monitor volume cannot be adjusted by VOL.

To prevent a cassette from being accidentally recorded over

Break out and remove the cassette tabs. To reuse the cassette for recording, cover the tab hole with adhesive tape.



Playing a Tape



1 Insert a cassette with the side to start playing facing the lid.
2 Select the tape speed to the same speed as that used for recording.
3 Press ◀.
4 Adjust the volume.

To	Press or slide
Stop playback/stop fast forward or rewind*	■⏏
Pause playback	Slide ▬PAUSE in the direction of the arrow. The REC/BATT (M-540V) or BATT (M-430) lamp, or BATT lamps (M-640V) go off.
Fast forward	Slide ◀◀CUE/▶▶REVIEW toward ◀◀CUE during stop.
Rewind	Slide ◀◀CUE/▶▶REVIEW toward ▶▶REVIEW during stop.
Search forward during playback (CUE)	Keep ◀◀CUE/▶▶REVIEW pushed down during playback and release it at the point you want.
Search backward during playback (REVIEW)	Keep ◀◀CUE/▶▶REVIEW pushed up during playback and release it at the point you want.

* If you leave the unit after the tape has been wound or rewound, the batteries will be consumed rapidly. Be sure to depress ■⏏.

Note

If the tape is completely wound or rewound while searching forward/backward during playback (CUE/REVIEW), the ◀◀CUE/▶▶REVIEW switch may not return to the center position when you release the switch. In this case, push back the switch to the center to start playback.

If you plug in headphones (not supplied) to the EAR jack, you will get monaural output from both left and right channels.

To increase the playback speed (M-640V only)

Slide the FAST PB switch in the direction of the arrow. The playback speed will be increased.
To return to the original speed, slide the FAST PB switch to the original position.

At the end of the tape

In the recording or playback mode, the tape stops at the end of the tape and the locked buttons will be released automatically (Automatic shut-off mechanism).
After fast forward or rewind, be sure to set ◀◀CUE/▶▶REVIEW back to the center.

SECTION 2
DISASSEMBLY

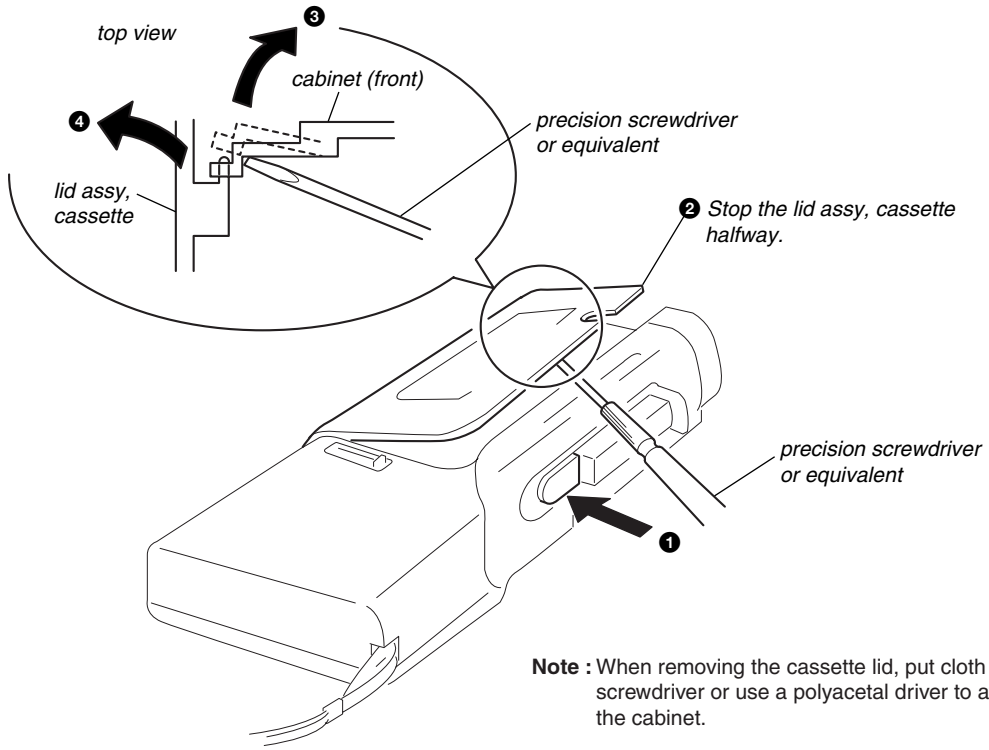
• The equipment can be removed using the following procedure.

Set → Lid assy, cassette → Cabinet (rear) assy → Main board → Mechanism deck → Head, ceramic (HRPE901)

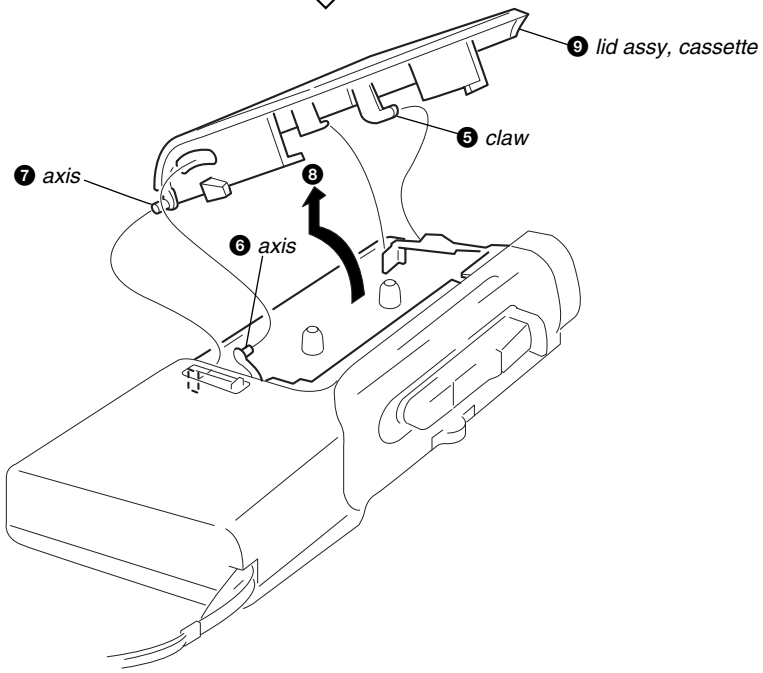
Set → Lid, battery case

Note : Follow the disassembly procedure in the numerical order given.

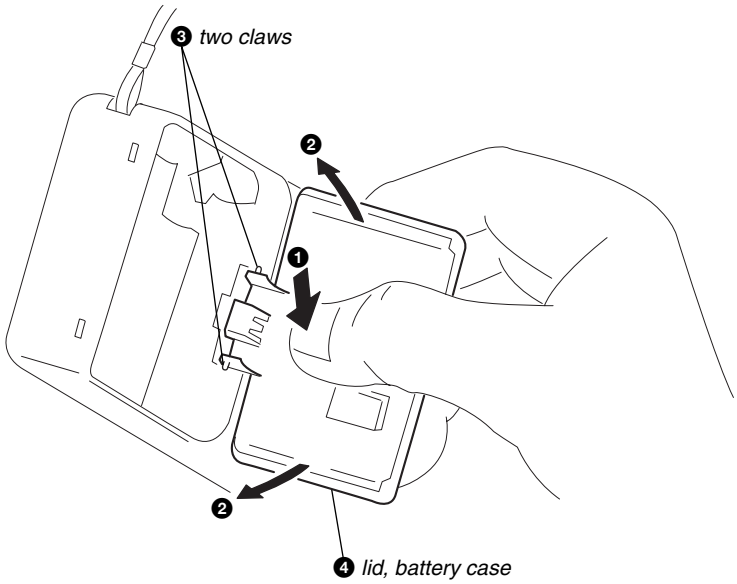
2-1. LID ASSY, CASSETTE



Note : When removing the cassette lid, put cloth on the end of a screwdriver or use a polyacetal driver to avoid damage to the cabinet.

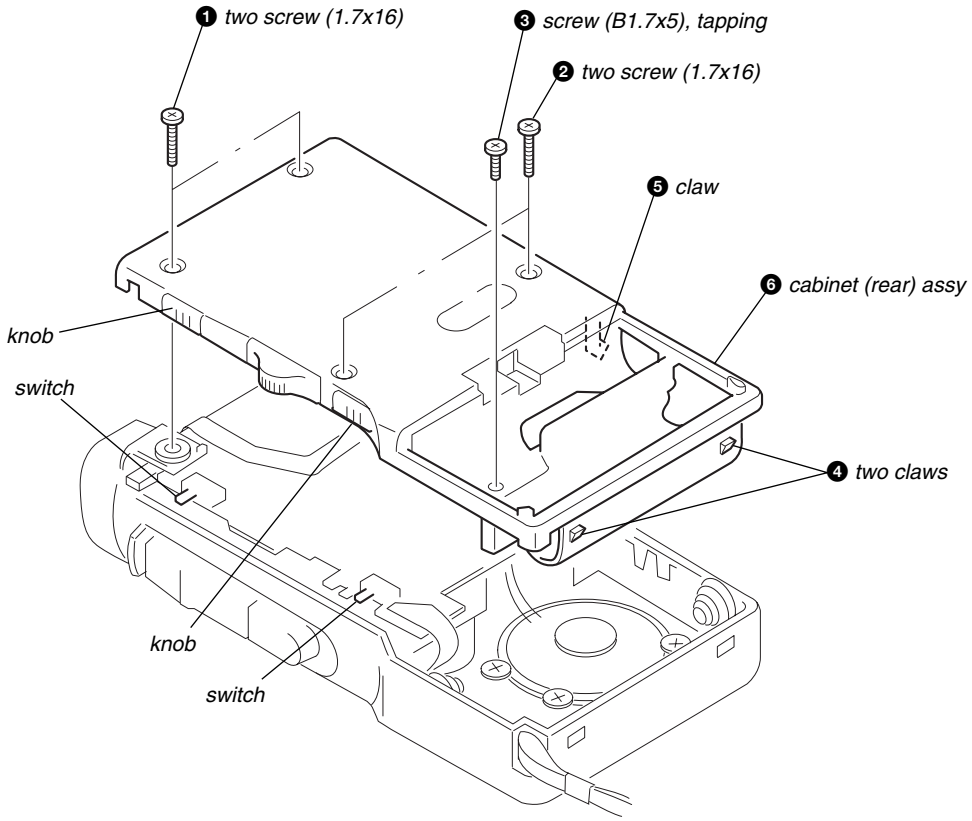


2-2. LID, BATTERY CASE

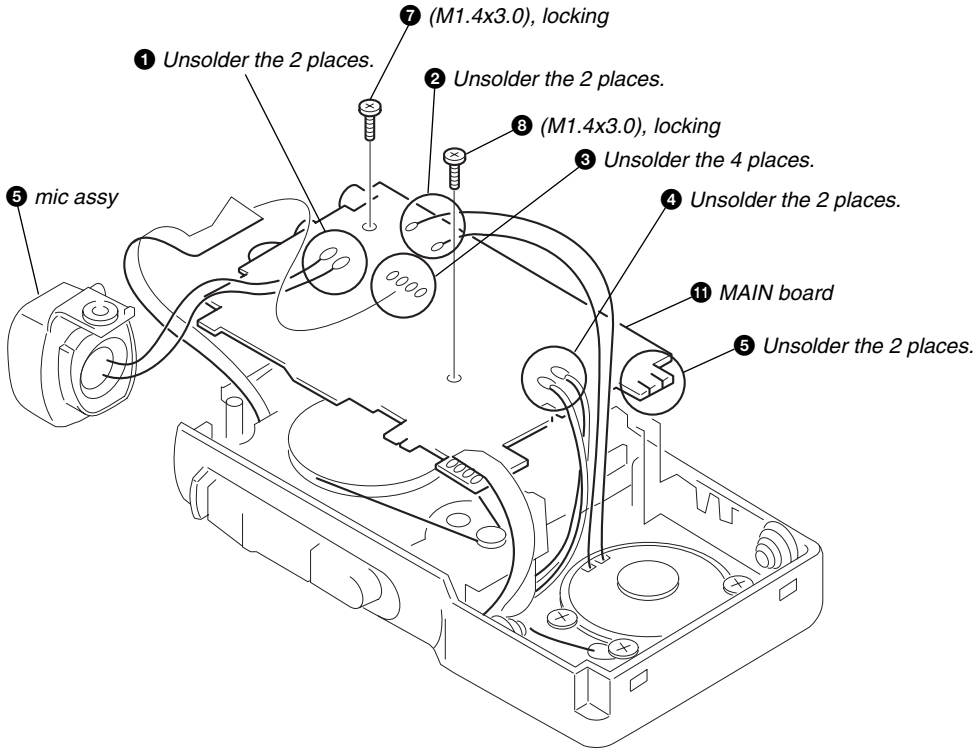


2-3. CABINET (REAR) ASSY

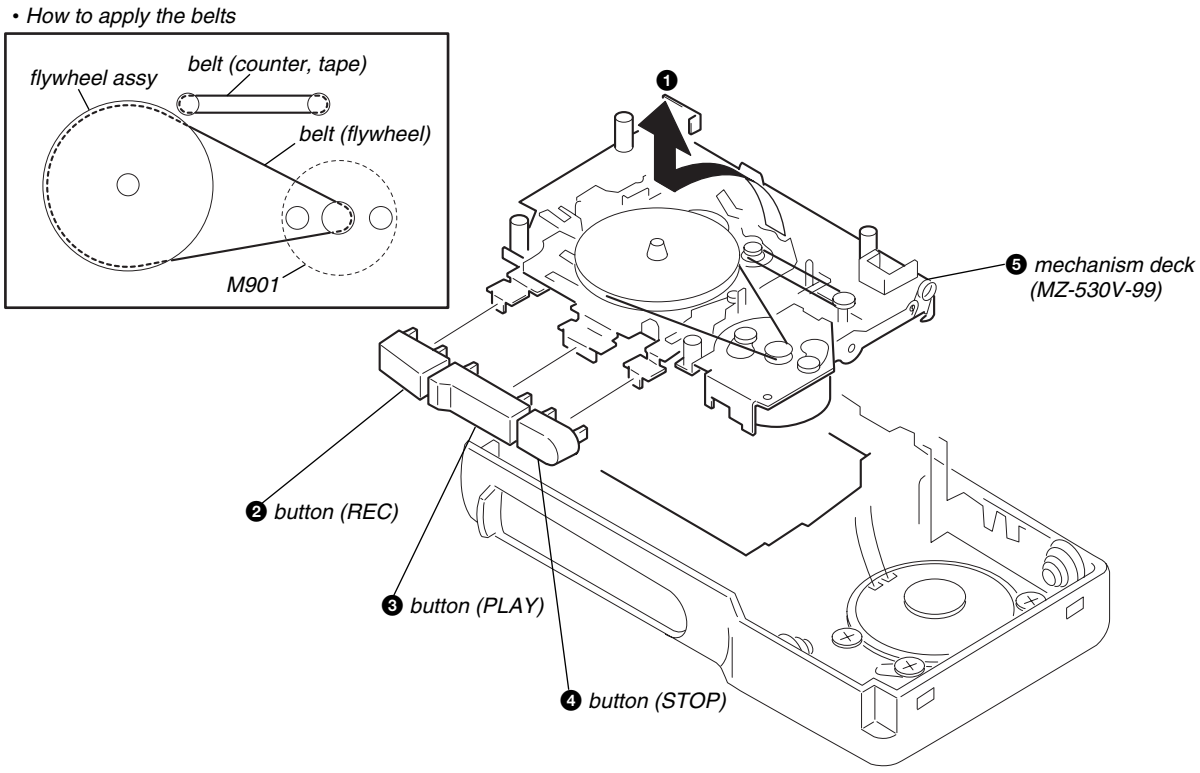
Note : When installing, fit the knobs and switches.



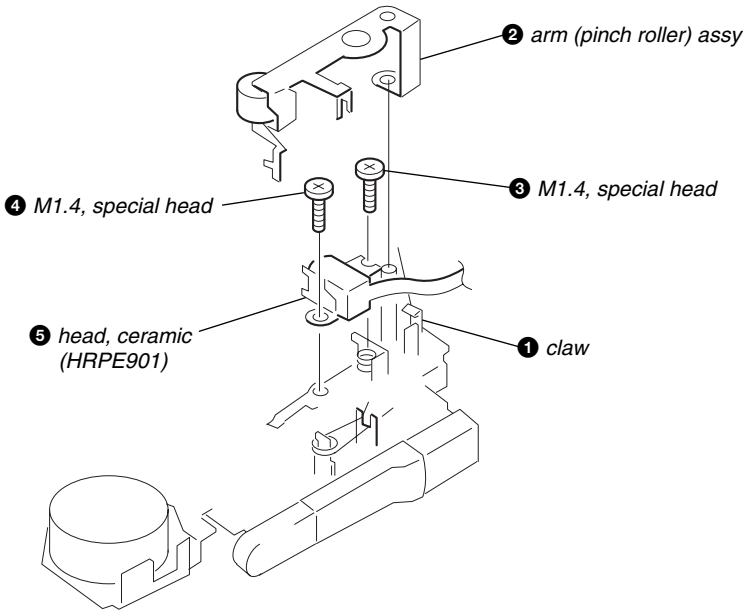
2-4. MAIN BOARD


❼ (M1.4x3.0), locking
❶ Unsolder the 2 places.
❷ Unsolder the 2 places.
❽ (M1.4x3.0), locking
❸ Unsolder the 4 places.
❺ mic assy
❹ Unsolder the 2 places.
⓫ MAIN board
❺ Unsolder the 2 places.

2-5. MACHANISM DECK



2-6. HEAD, CERAMIC (HRPE901)



SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback/erase head pinch roller
   rubber belts capstan
2. Demagnetize the record/playback/erase head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
   Power supply voltage : 3 Vdc
   TAPE SPEED switch : 2.4cm

Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-103M	0.49 – 1.27 mN • m (5 – 13 g • cm) (0.07 – 0.180 oz • inch)
Fast Forward	CQ-201M	more than 2.94 mN • m (more than 30 g • cm) (more than 0.42 oz • inch)
Rewind	CQ-201M	more than 2.94 mN • m (more than 30 g • cm) (more than 0.42 oz • inch)

Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403M	more than 1.96 mN • m (more than 20 g • cm) (more than 0.28 oz • inch)

SECTION 4
ELECTRICAL ADJUSTMENTS

Test Tape

Type	Signal	Used for	Tape Speed (cm/s)
S-2-A030	3 kHz, – 20 dB	Head Azimuth Adjustment	2.4
WS-24	3 kHz, – 10 dB	Tape Speed Adjustment	2.4
WS-12			1.2

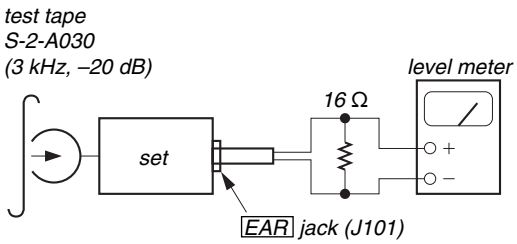
Record/Playback/Erase Head Azimuth Adjustment

Setting:

VOL control : mechanical mid
TAPE SPEED switch : 2.4cm/s
VOR switch : OFF

Procedure:

1. Mode : Playback

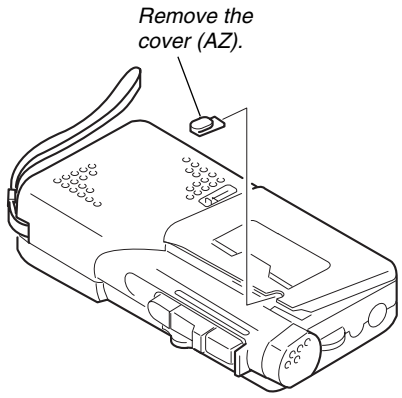


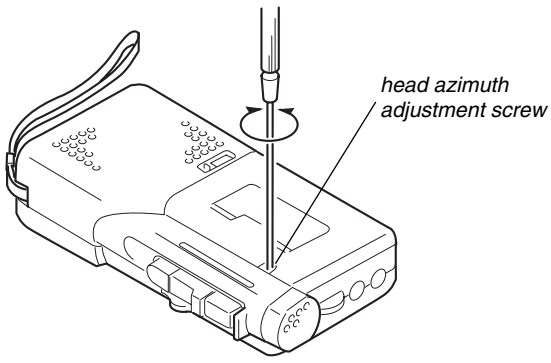
2. Turn the adjustment screw to obtain the maximum reading on level meter.

Note: Several peaks may appear, but the maximum.

Adjustment Location :

First remove the cover (AZ).





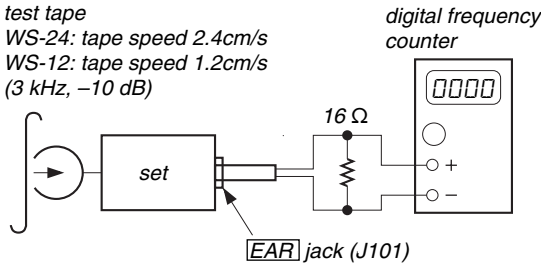
Tape Speed Adjustment

Setting:

VOL control : mechanical mid
VOR switch : OFF

Procedure:

• Reform 1.2 cm/s speed adjustment before 2.4 cm/s speed adjustment mode : playback



1. Tape Speed : 2.4 cm/s
   Playback WS-24 (tape center part) and adjust RV601 so that reading on the digital frequency counter becomes 3,000 Hz.

2. Tape Speed : 1.2 cm/s
   Playback WS-12 (tape center part) and adjust RV602 so that reading on the digital frequency counter becomes 3,000 Hz.

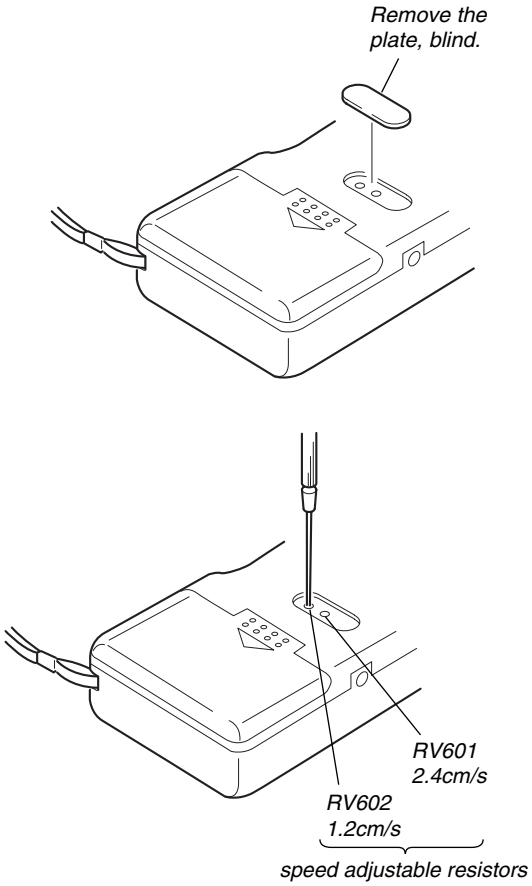
Specification Value:

Tape Speed	Frequency counter
2.4 cm/s	2,880 to 3,120 Hz
1.2 cm/s	2,850 to 3,150 Hz

Frequency difference between the beginning and the end of the tape should be within ±0.5%.
2.4 cm/s (15 Hz)
1.2 cm/s (15 Hz)

Adjustment Location :

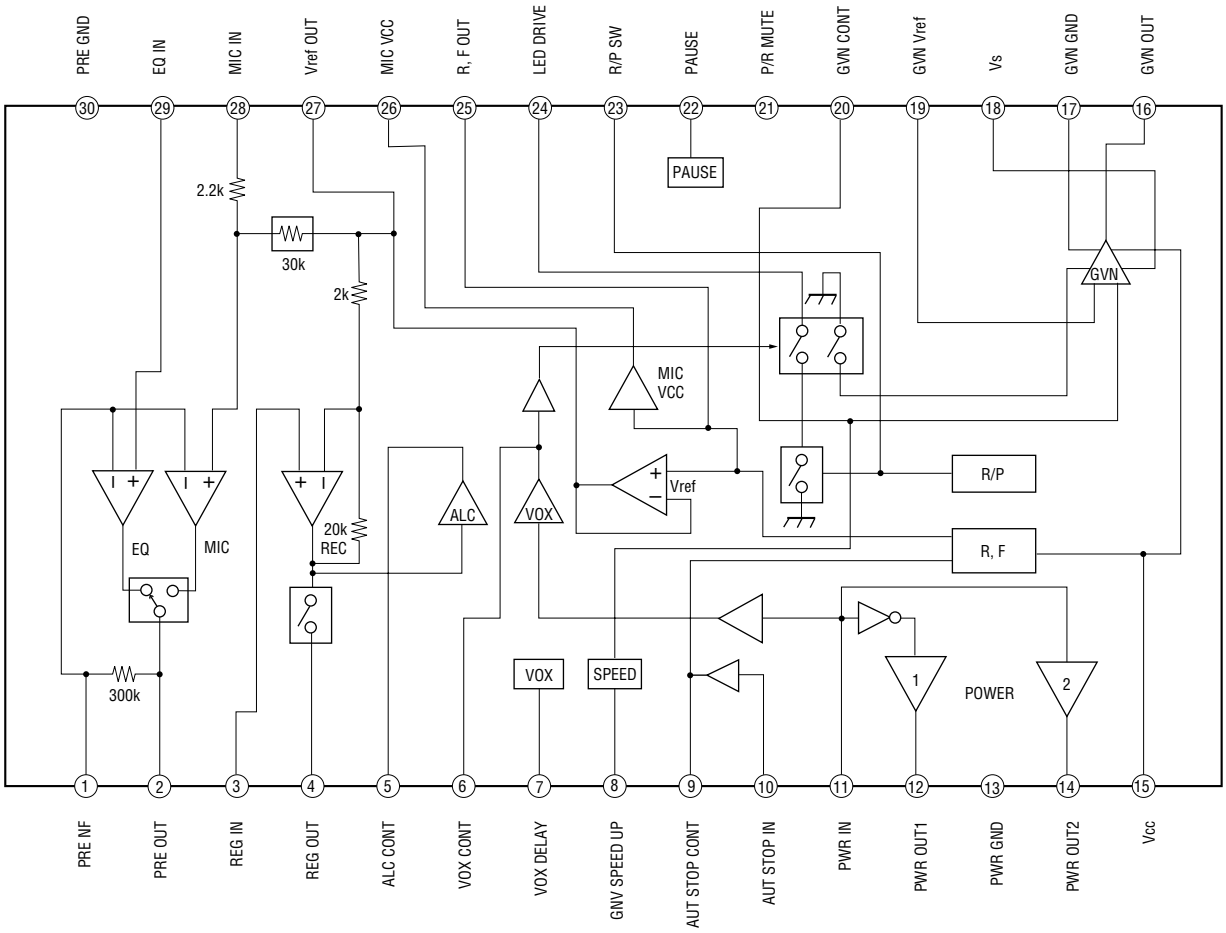
First remove the plate, blind.



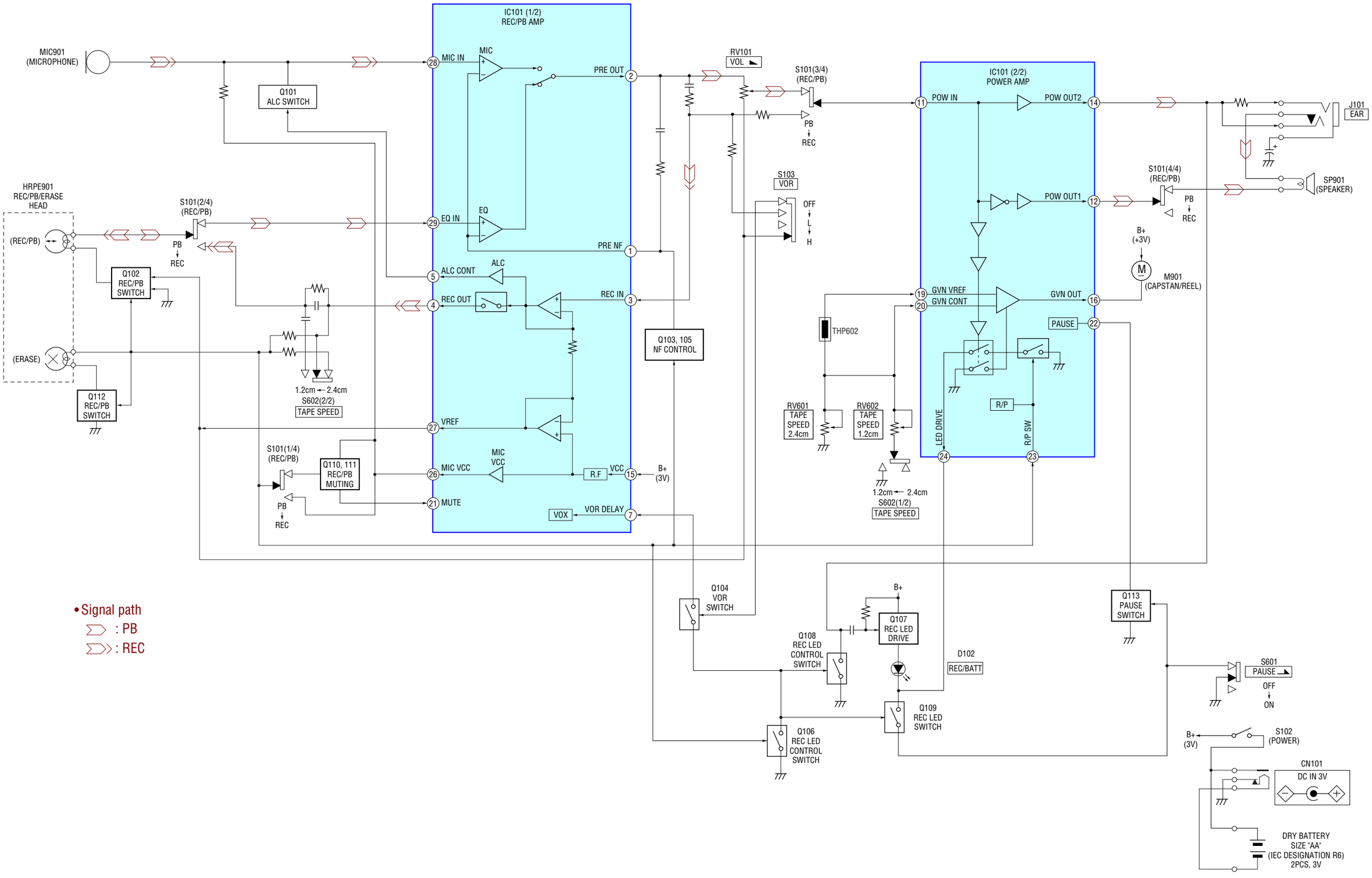
SECTION 5
DIAGRAMS

• IC Block Diagrams

IC101 LA4168ML-TE-L

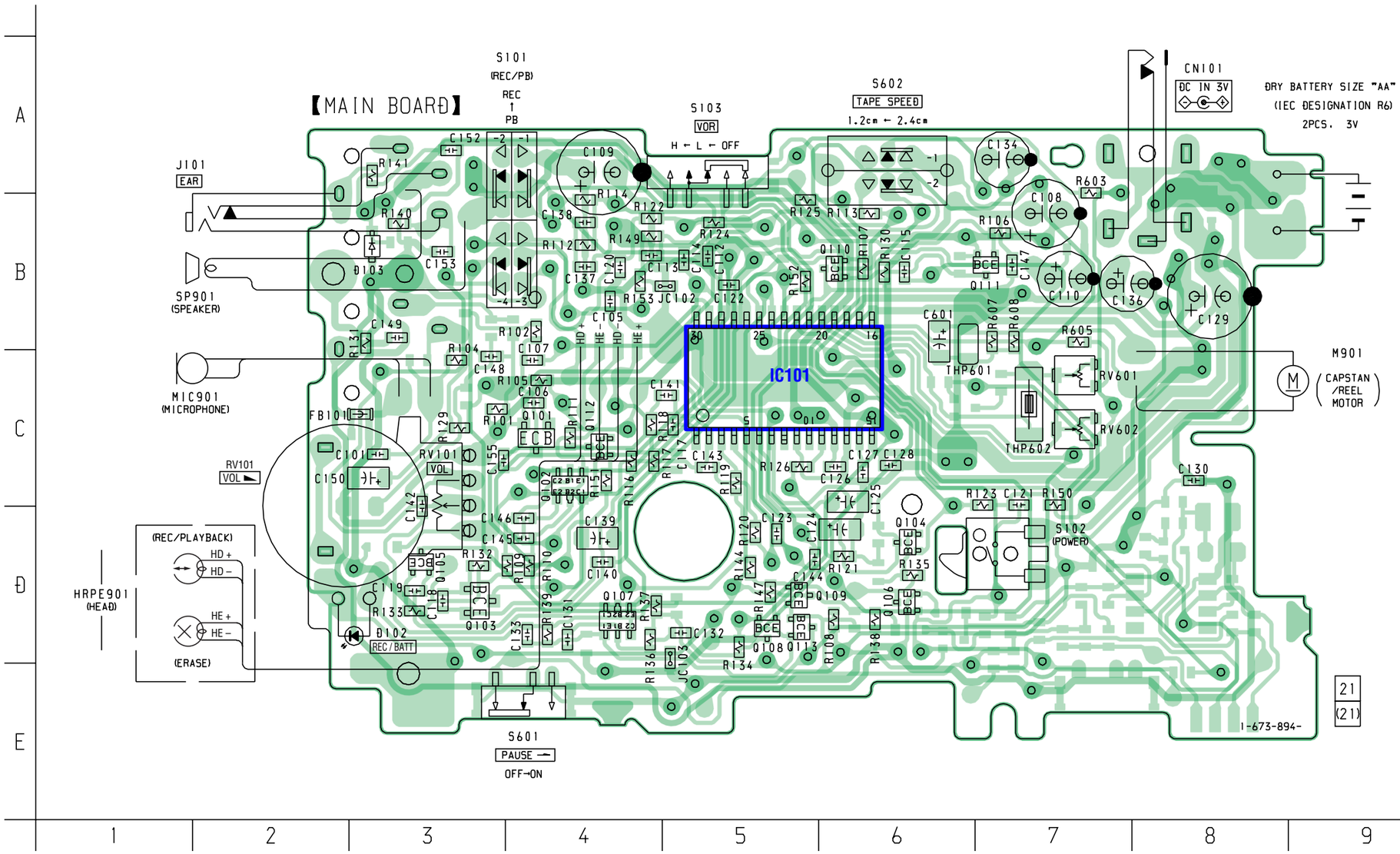


5-1. BLOCK DIAGRAM



• Signal path
: PB
: REC

5-2. PRINTED WIRING BOARD



- **Semiconductor Location**

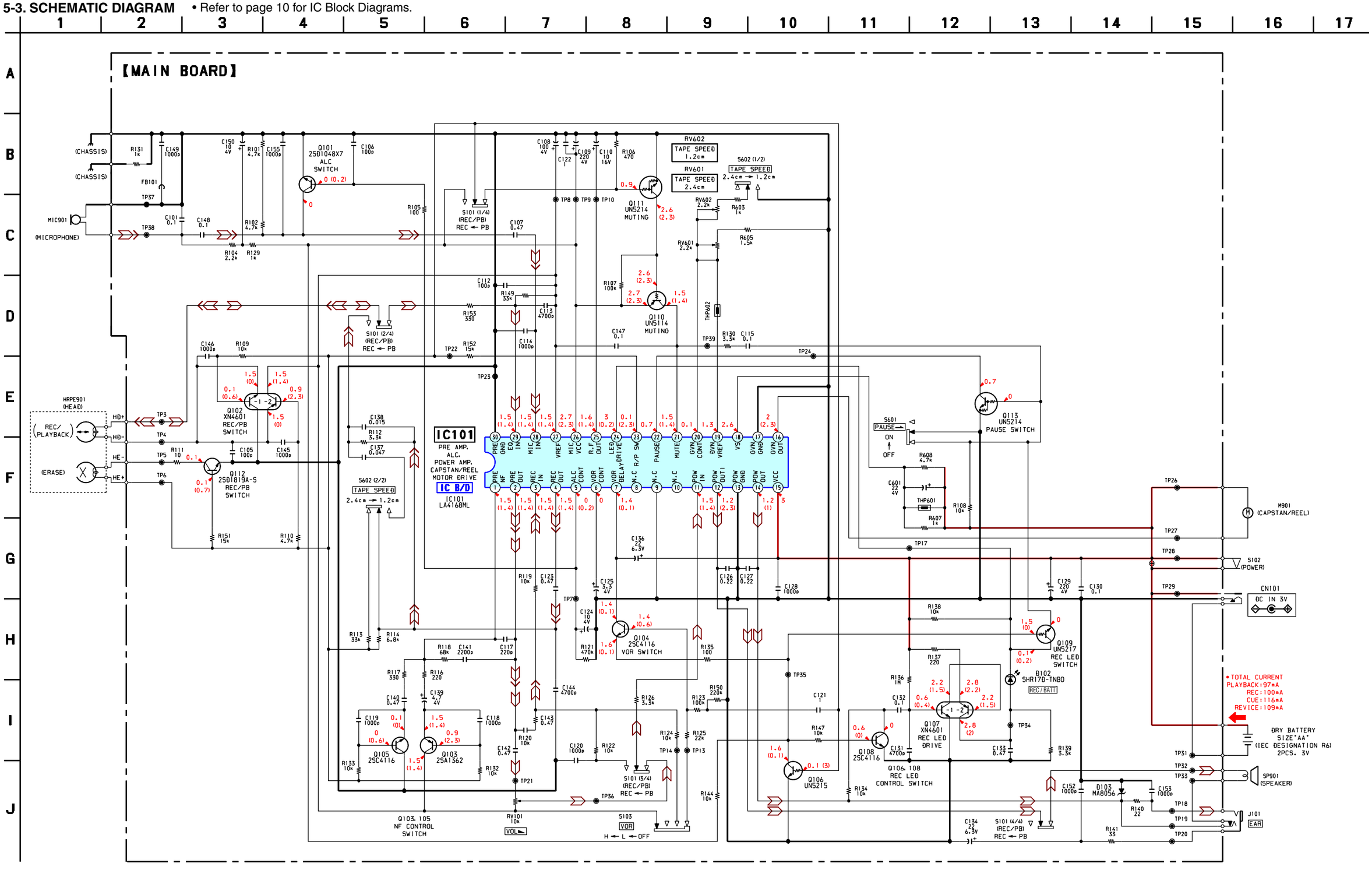
Ref. No.	Location
D102	D-3
D103	B-3
IC101	C-5
Q101	C-4
Q102	C-4
Q103	D-3
Q104	D-6
Q105	D-3
Q106	D-6
Q107	D-4
Q108	D-5
Q109	D-6
Q110	B-6
Q111	B-7
Q112	C-4
Q113	D-5

Note:

- ——— : parts extracted from the conductor side.
- ○ : Through hole.
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

5-3. SCHEMATIC DIAGRAM

• Refer to page 10 for IC Block Diagrams.



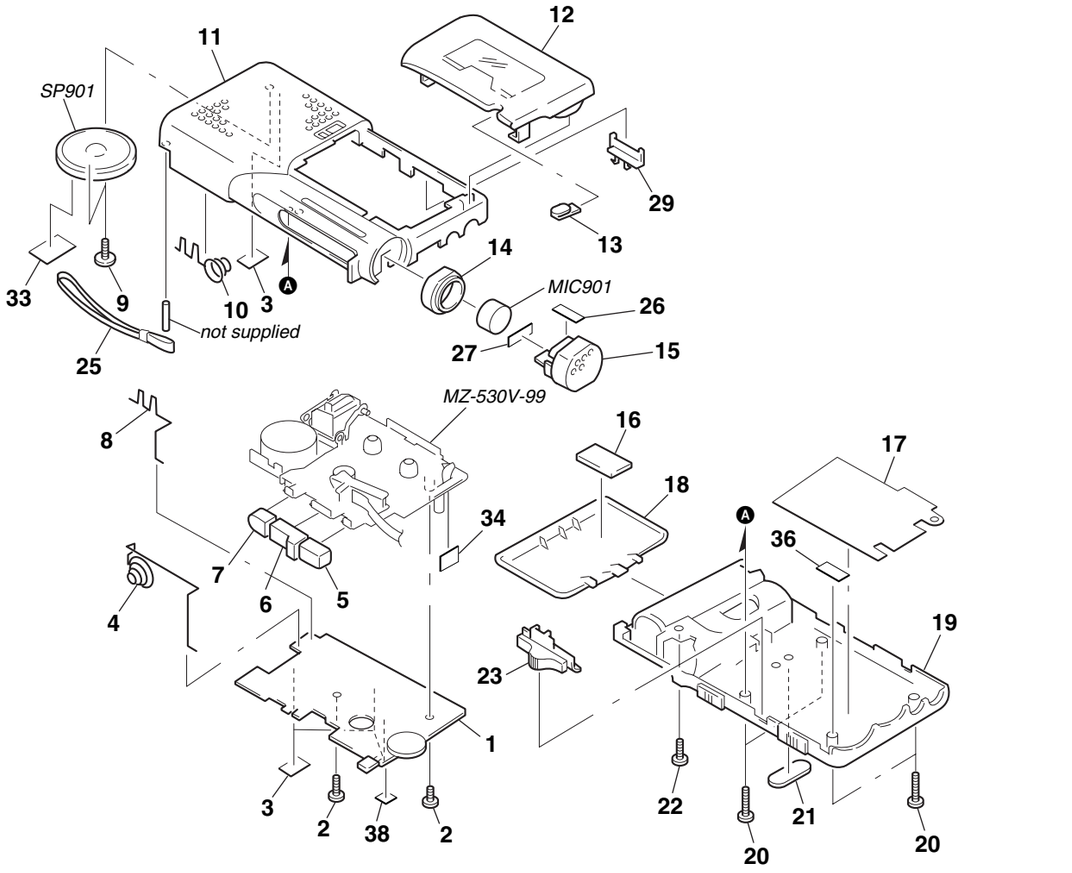
Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.
- ▬ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 3 V and fed with regulated dc power supply from battery terminal.
- Voltage is dc with respect to ground under no-signal condition.
  no mark : PB
  ( ) : REC
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : PB
  : REC

SECTION 6
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  Parts Color Cabinet's Color
- Accessories and packing materials are given in the last of this parts list.

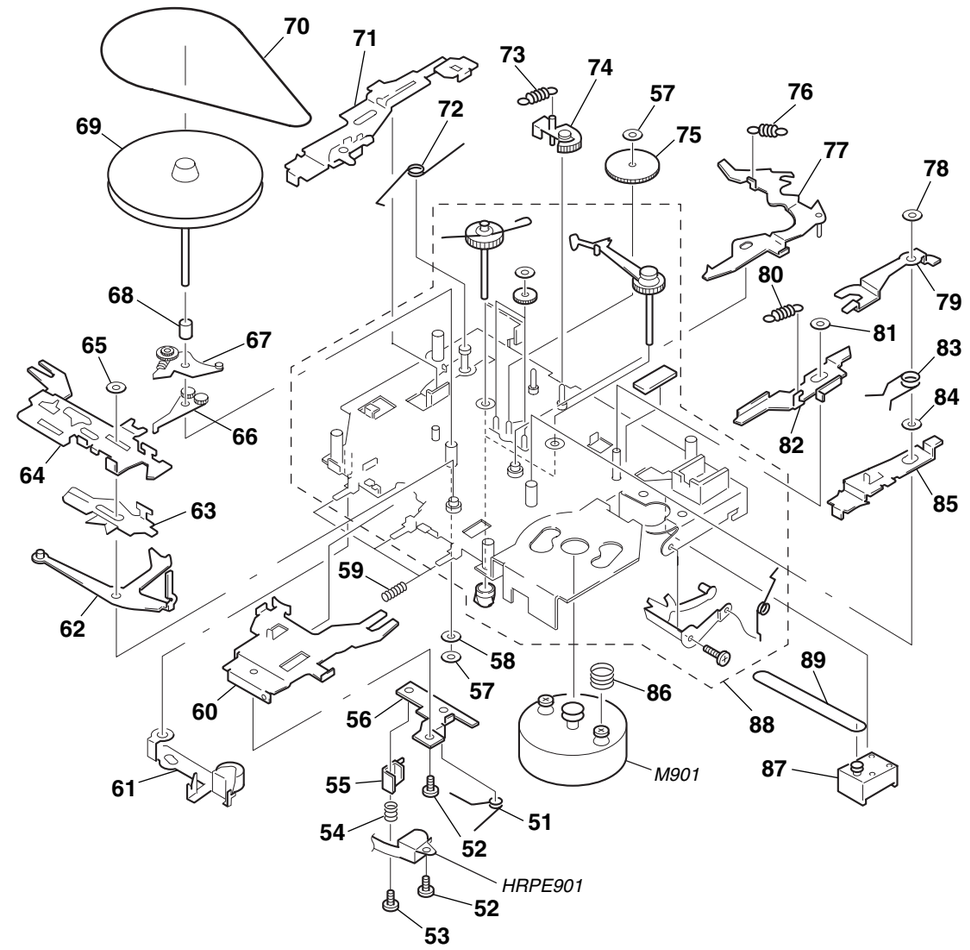
6-1. CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	A-3021-219-A	MAIN BOARD, COMPLETE	
2	3-704-197-31	LOCK, SERRAT IB	
3	3-831-441-01	SPACER, KNOB	
4	3-034-687-01	TERMINAL (-), BATTERY	
5	3-031-376-11	BUTTON (REC)	
6	3-031-375-01	BUTTON (PLAY)	
7	3-031-374-01	BUTTON (STOP)	
8	3-034-686-01	TERMINAL (+), BATTERY	
9	3-034-792-01	SCREW, TAPPING (B2.0)	
10	3-010-503-01	SPRING (B), BATTERY COIL	
11	3-226-968-11	CABINET (FRONT)	
12	X-3380-062-1	LID ASSY, CASSETTE	
* 13	3-033-185-21	COVER (AZ)	
14	3-031-382-01	CUSHION (MIC)	
15	3-031-372-01	CASE, MICROPHONE	
16	3-914-930-11	CUSHION (BATTERY CASE LID)	
17	3-037-004-01	PAPER (A), SHIELD	

Ref. No.	Part No.	Description	Remark
18	3-031-371-21	LID, BATTERY CASE	
19	X-3380-083-1	CABINET (REAR) ASSY	
20	3-035-255-11	SCREW (1.7X16)	
21	3-358-363-71	PLATE, BLIND	
22	3-318-203-72	SCREW (B1.7X5), TAPPING	
23	3-036-668-11	KNOB (FR)	
26	3-037-192-01	SPACER (MIC)	
27	3-039-027-01	SPACER (MIC)	
25	3-328-319-01	STRAP, HAND	
29	3-033-358-01	KNOB (VOR)	
33	3-037-193-01	CUSHION (SP)	
34	3-036-882-01	SPACER (JACK)	
* 36	3-037-556-01	SHEET (A), GROUND	
* 38	3-037-557-01	SHEET (B), GROUND	
SP901	1-529-188-11	SPEAKER (3.6cm)	
MIC901	1-542-386-11	MICROPHONE, ELECTRET CONDENSER (MIC)	

6-2. MECHANISM DECK SECTION (MZ-530V-99)



Ref. No.	Part No.	Description	Remark
51	3-028-965-01	SPRING (PINCH ARM), TORSION	
52	3-704-197-01	SCREW (M1.4), SPECIAL HEAD	
53	3-704-197-71	SCREW (M1.4X4.5), LOCKING	
54	3-028-960-01	SPRING (AZIMUTH), COMPRESSION	
55	3-028-909-01	GUIDE (N), TAPE	
* 56	3-029-640-01	LEVER (PLAY.OW)	
57	3-331-007-21	WASHER	
58	3-350-989-01	WASHER	
59	3-028-961-01	SPRING (BUTTON), COMPRESSION	
60	3-028-924-01	LEVER (PLAY)	
61	X-3376-235-1	ARM (PINCH ROLLER) ASSY	
62	3-046-281-01	LEVER (POWER SW) (B)	
63	3-028-940-01	LEVER (SRS)	
64	3-028-938-01	LEVER (SLIDE)	
65	3-578-224-00	WASHER	
66	X-3376-227-1	LEVER (F/R) ASSY	
67	X-3376-228-1	LEVER (TU) ASSY	
68	3-029-634-01	BEARING	
69	X-3376-231-1	FLYWHEEL ASSY	
70	3-377-420-11	BELT (FLYWHEEL)	
71	X-3376-224-1	LEVER (REC) ASSY	

Ref. No.	Part No.	Description	Remark
72	3-029-641-01	SPRING, TORSION	
73	3-028-957-01	SPRING (CAM GEAR), TENSION	
74	3-028-966-01	GEAR (S-OFF-OW), CAM	
75	X-3376-230-1	LIMITER ASSY	
76	3-028-955-01	SPRING (LOCK), TENSION	
77	X-3377-535-1	LEVER (LOCK) ASSY	
78	4-992-239-01	WASHER (A)	
* 79	3-028-967-01	LEVER (PAUSE RELEASE)	
80	3-028-954-01	SPRING (SW LEVER), TENSION	
81	3-321-813-71	WASHER, COTTER POLYTHYLENE	
82	3-028-928-01	LEVER (EJECT)	
83	3-028-964-01	SPRING (SLIDER), TORSION	
84	4-926-562-01	WASHER, STOPPER	
85	3-028-927-01	LEVER (STOP)	
86	3-028-917-01	SPRING (GROUND), COMPRESSION	
87	1-548-579-41	COUNTER, TAPE (SMALL TYPE)	
88	X-3376-223-1	CHASSIS (COMP) ASSY	
89	3-343-948-01	BELT (COUNTER,TAPE)	
HRPE901	1-500-593-11	HEAD, CERAMIC (REC/PB/ERASE)	
M901	1-698-533-11	MOTOR, DC (CAPSTAN/REEL) (including PULLEY)	

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SECTION 7
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description			Remarks
	A-3021-219-A	MAIN BOARD, COMPLETE			
		**********			
	3-036-882-01	SPACER (JACK)			
	4-935-749-11	SPACER (S)			
		< CAPACITOR >			
C101	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C105	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C106	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C107	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V
C108	1-124-433-00	ELECT	100uF	20.00%	4V
C109	1-124-434-00	ELECT	220uF	20.00%	4V
C110	1-104-396-11	ELECT	10uF	20.00%	16V
C112	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C113	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C114	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C115	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C117	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C118	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C119	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C120	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C121	1-115-156-11	CERAMIC CHIP	1uF		10V
C122	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C123	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C124	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C125	1-104-912-11	TANTAL. CHIP	3.3uF	20.00%	4V
C126	1-115-467-11	CERAMIC CHIP	0.22uF	10.00%	10V
C127	1-115-467-11	CERAMIC CHIP	0.22uF	10.00%	10V
C128	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C129	1-124-434-00	ELECT	220uF	20.00%	4V
C130	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C131	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C132	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C133	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C134	1-126-153-11	ELECT	22uF	20%	6.3V
C136	1-126-153-11	ELECT	22uF	20%	6.3V
C137	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C138	1-164-245-11	CERAMIC CHIP	0.015uF	10.00%	25V
C139	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C140	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V
C141	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C142	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C143	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C144	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C145	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C146	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C147	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C148	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C149	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C150	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C152	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C153	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C155	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C601	1-104-847-11	TANTAL. CHIP	22uF	20.00%	4V
		< CONNECTOR >			
CN101	1-580-372-21	JACK,DC(POLARITY UNIFIED TYPE)(DC IN 3V)			
		< DIODE >			
D102	8-719-062-18	LED SHR17D-TNBO (REC)			
D103	8-719-977-03	DIODE DTZ5.6B			
		< FERRITE BEAD >			
FB101	1-216-864-11	SHORT	0		
		< IC >			
IC101	8-759-492-49	IC LA4168ML-TE-L			
		< JACK >			
J101	1-785-791-11	JACK (EAR)			
		< JUMPER >			
JC102	1-216-864-11	SHORT	0		
JC103	1-216-864-11	SHORT	0		
		< TRANSISTOR >			
Q101	8-729-800-37	TRANSISTOR	2SD1048-X7		
Q102	8-729-402-84	TRANSISTOR	XN4601		
Q103	8-729-230-72	TRANSISTOR	2SA1362YG		
Q104	8-729-230-63	TRANSISTOR	2SC4116-YG		
Q105	8-729-230-63	TRANSISTOR	2SC4116-YG		
Q106	8-729-014-12	TRANSISTOR	RN1311-TE85L		
Q107	8-729-402-84	TRANSISTOR	XN4601		
Q108	8-729-230-63	TRANSISTOR	2SC4116-YG		
Q109	8-729-422-48	TRANSISTOR	UN5217		
Q110	8-729-028-76	TRANSISTOR	DTA114YUA-T106		
Q111	8-729-402-93	TRANSISTOR	UN5214		
Q112	8-729-402-33	TRANSISTOR	2SD1819A-S		
Q113	8-729-402-93	TRANSISTOR	UN5214		

MAIN

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R101	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R102	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R104	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R105	1-216-809-11	METAL CHIP	100	5%	1/16W
R106	1-216-817-11	METAL CHIP	470	5%	1/16W
R107	1-216-845-11	METAL CHIP	100K	5%	1/16W
R108	1-216-833-11	METAL CHIP	10K	5%	1/16W
R109	1-216-833-11	METAL CHIP	10K	5%	1/16W
R110	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R111	1-216-797-11	METAL CHIP	10	5%	1/16W
R112	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R113	1-216-839-11	METAL CHIP	33K	5%	1/16W
R114	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R116	1-216-813-11	METAL CHIP	220	5%	1/16W
R117	1-216-815-11	METAL CHIP	330	5%	1/16W
R118	1-216-843-11	METAL CHIP	68K	5%	1/16W
R119	1-216-833-11	METAL CHIP	10K	5%	1/16W
R120	1-216-833-11	METAL CHIP	10K	5%	1/16W
R121	1-216-853-11	METAL CHIP	470K	5%	1/16W
R122	1-216-833-11	METAL CHIP	10K	5%	1/16W
R123	1-216-845-11	METAL CHIP	100K	5%	1/16W
R124	1-216-833-11	METAL CHIP	10K	5%	1/16W
R125	1-216-837-11	METAL CHIP	22K	5%	1/16W
R126	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R129	1-216-821-11	METAL CHIP	1K	5%	1/16W
R130	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R131	1-216-821-11	METAL CHIP	1K	5%	1/16W
R132	1-216-833-11	METAL CHIP	10K	5%	1/16W
R133	1-216-833-11	METAL CHIP	10K	5%	1/16W
R134	1-216-833-11	METAL CHIP	10K	5%	1/16W
R135	1-216-809-11	METAL CHIP	100	5%	1/16W
R136	1-216-857-11	METAL CHIP	1M	5%	1/16W
R137	1-216-813-11	METAL CHIP	220	5%	1/16W
R138	1-216-833-11	METAL CHIP	10K	5%	1/16W
R139	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R140	1-216-801-11	METAL CHIP	22	5%	1/16W
R141	1-216-803-11	METAL CHIP	33	5%	1/16W
R144	1-216-833-11	METAL CHIP	10K	5%	1/16W
R147	1-216-833-11	METAL CHIP	10K	5%	1/16W
R149	1-216-839-11	METAL CHIP	33K	5%	1/16W
R150	1-216-849-11	METAL CHIP	220K	5%	1/16W
R151	1-216-835-11	METAL CHIP	15K	5%	1/16W
R152	1-216-835-11	METAL CHIP	15K	5%	1/16W
R153	1-216-815-11	METAL CHIP	330	5%	1/16W
R603	1-216-821-11	METAL CHIP	1K	5%	1/16W
R605	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R607	1-216-821-11	METAL CHIP	1K	5%	1/16W
R608	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
		< VARIABLE RESISTOR >			
RV101	1-237-731-21	RES, VAR, CARBON 10K (VOL)			
RV601	1-223-584-11	RES, ADJ, CARBON 2.2K			
RV602	1-223-584-11	RES, ADJ, CARBON 2.2K			
		< SWITCH >			
S101	1-572-964-11	SWITCH, SLIDE (REC/PB)			
S102	1-572-688-11	SWITCH, PUSH (1 KEY)(POWER)			
S103	1-692-605-11	SWITCH, SLIDE (VOR)			
S601	1-572-922-11	SWITCH, SLIDE (PAUSE)			
S602	1-692-298-11	SWITCH, SLIDE (TAPE SPEED)			
		< THERMISTOR(POSITIVE) >			
THP601	1-810-552-11	THERMISTOR, POSITIVE			
**********					
		MISCELLANEOUS			
		**********			
M901	1-698-533-11	MOTOR, DC (CAPSTAN/REEL) (including PULLEY)			
MIC901	1-542-386-11	MICROPHONE, ELECTRET CONDENSER (MIC)			
HRPE901	1-500-593-11	HEAD, CERAMIC (REC/PB/ERASE)			
SP901	1-529-188-11	SPEAKER (3.6cm)			
**********					
		ACCESSORIES & PACKING MATERIALS			
		**********			
	3-229-705-11	MANUAL, INSTRUCTION (ENGLISH/CHINESE/HUNGARIAN/RUSSIAN) (Chinese/East European)			
	3-229-705-21	MANUAL, INSTRUCTION (CHINESE/KOREAN/POLISH/CZECH) (East European)			
	3-229-705-31	MANUAL, INSTRUCTION (ENGLISH/SLOVAK) (East European)			
	3-229-705-71	MANUAL, INSTRUCTION (ENGLISH/SPANISH/ITALIAN/PORTUGUESE) (E)			
	3-229-705-91	MANUAL, INSTRUCTION (ENGLISH/CHINESE) (E)			

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.02	New